

## TYPE LOCALITY RESTRICTION OF *HYPSIGLENA TORQUATA* GÜNTHER

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Since the description of *Hypsiglena torquata* by Günther in 1860 and the designation of the type locality as Nicaragua, specimens have been collected only in central Mexico and north into the United States (Tanner 1946, Dixon and Dean 1986). Just how far south in Mexico *Hypsiglena* may range is perhaps not yet known. Specimens have been taken in Morelos, Guerrero, and Michoacan but not as yet, to my knowledge, from the states of Mexico, Puebla, Veracruz, Oaxaca, or Chiapas. If *Hypsiglena* occurs in Nicaragua, the question arises as to why additional specimens have not been taken from the intervening areas.

There is now general agreement that *Hypsiglena* does not occur south of Mexico, and perhaps not in southern Mexico; however, Smith and Taylor (1945) list it as “perhaps to Ecuador and Venezuela.” Peters (1956) discusses in detail the specimens responsible for placing *Hypsiglena* in South America and concludes that this genus does not occur south of Costa Rica. Peters and Orejas-Miranda (1970) list the distribution of *H. torquata* as “Southwestern United States through Mexico and Baja California to Costa Rica.” Savage and Villa (1986) do not include it in their Herpetofauna of Costa Rica, and Villa et al. (1988) do not list it in their Middle American Herpetology. Peters and Orejas-Miranda (1970) list it only to Costa Rica, without including additional records; Savage and Villa (1986) and Villa et al. (1988) exclude *Hypsiglena* from areas south of Mexico. Dunn (1936:6) lists a specimen from Costa Rica (Museo Nacional) but provides no museum number.

Dixon (1965) recognized that there was a problem in accepting Nicaragua as the type locality for *Hypsiglena torquata* Günther. This he based on the similar color pattern of the

type when compared with specimens from Mazatlán, Sinaloa. He communicated his concern with Mr. J. C. Battersby at the British Museum, who provided basic character information for the type specimen. Dixon then concluded that “the locality from which the type specimen came is somewhat in doubt” and that “until both co-types are examined and further collecting done, it would be unwise to change the type locality, even though it appears to be in error.”

The original description of *Leptodeira torquata* Günther 1860 provides not only an adequate description based on scale patterns but also includes a drawing of the type specimen (Fig. 1A). The drawing exhibits a color pattern that is similar to most specimens seen from south central Mexico and is apparently representative of *H. torquata* from that area (Figs. 1B, C, D). The ventral-caudal counts of 174–174–46–50 listed in the original description total 220–224 for the two type specimens. This does not match the totals for specimens of *H. t. torquata* listed from west central Mexico (Dixon and Dean 1986). A series of 27 specimens that I have examined from Guanajuato, Guerrero, Morelos, Michoacan, Jalisco, and Colima have a ventral-caudal range of 202–214. If the ventral-caudal counts for the types are correct as listed in the original description, it would be difficult to include them in the populations of *H. t. torquata* of central and southwestern Mexico.

To verify the accuracy of the published data for the type, I contacted Dr. Colin McCarthy at the British Natural History Museum for additional information concerning collecting documentation and the accuracy of the scale counts published by Günther (1860). The following response was received:

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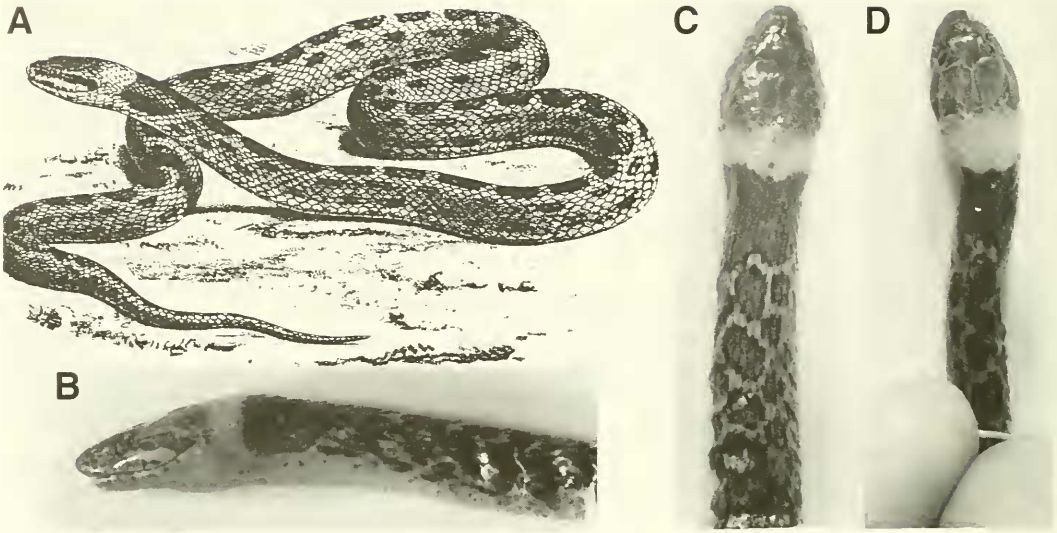


Fig. 1. *Hypsiglena torquata*. A, Drawing of *Leptodeira torquata*, as figured by Günther (1860). B, C, D, Photos of specimens of *H. t. torquata* taken in west central Mexico: B and C, LACM 7269, 55.4 miles SE of Escuinapa, Nayarit; D, BYU 23757, 25 miles S of El Salado, Sinaloa, Mexico.

I am afraid that there is no additional documentary evidence here regarding the collectors of the specimens. I note that we received it from the Derby Museum, so I imagine that if there was ever any associated documentation of that sort it might be there. The Derby Museum is still in existence though without any names or reference numbers I would have thought it would be impossible for them to provide information.

Dr. McCarthy provided the following data for the type specimen, 46.1.1.15 (formerly 61.12.30.97 as published by Smith and Taylor 1945): "ventrals 170 (Dowling count, add 2 if you prefer to count from the first expanded scale). Subcaudals 42 pairs (+1 terminal scale). It appears to be a female."

In counting ventrals I have always started with the first scale that is noticeably wider than long. It appears that there are in the type 2 questionable scales that Dowling considered gulars; they might be small ventrals. In counting caudals I have always included the terminal scale in the count. Based on the present data, ventrals of the type are either 170 or 172 and caudals 43. These add to 213 or 215 ventral-caudals for the type specimen in the British Museum, which is within the range for females in populations of central or southwest-central Mexico.

The present information is not sufficient to place the type locality at a given location, but it does provide sufficient data to place the area of

origin in central Mexico. The scale and color patterns could place it in one of the states listed above or perhaps in one of several adjoining states.

Other scale patterns of the type specimen taken from the original description are similar to specimens from central and western Mexico. Quoting Günther (1860): "The medial lower labial is triangular and rather small; nine lower labials, the first of which is in contact with its fellow behind the median shield." One specimen (Taylor 5561, a female) from a series of 8 specimens from Morelos has nearly all scale pattern characteristics of the type specimen: ventrals 171, pre- and post-oculars 2-2, infralabials 9-9, temporals 1-2. The only difference is that the type has 8-8 supralabials rather than 7-7 as in the Taylor specimen. However, other specimens from Morelos have 8-8 supralabials. A specimen (USNM 46513 female) from Michoacan has 173 ventrals, 39 caudals (total 212), and 9-10 infralabials. Other specimens from west central Mexico also approach the scale pattern of the type based on the recount of ventrals and caudals of the type.

By carefully examining the drawing of the type (Fig. 1A), one can see that the artist appears to have virtually duplicated the color pattern of the entire snake. The head, nape, and body pattern are near duplicates of some specimens from Mexico. The white band is

about 4 scales in length and the dark nape band 6 or 7. In the series from Morelos, the white band is 4–5 scales long and the dark one 5–6 long. Dorsal body spots range from 45 to 52. In the drawing of the type, I count 43, and there are some hidden by the head. If this is, and it appears to be, an essentially accurate drawing of the type, it seemingly places it with the *Hypsiglena* from west central Mexico.

The color patterns are helpful in placing the type in any of the listed Mexican states, but it is the scale patterns such as the ventral-caudal totals and the infralabials that effectively relate the type to west central Mexico, perhaps to either Morelos or Michoacan.

In the original description 2 specimens were available to Günther. I asked Dr. McCarthy if he knew the location of the 2nd specimen. He referred me to Mr. Malcom Largen at the Liverpool Museum. The following, a rather detailed account of not only the record of the type specimen but also documentary information concerning both type specimens, is his complete statement:

Dear Dr. Tanner

I regret to report that no example of *Hypsiglena torquata* survives in the Liverpool Museum and that we have no record of when and how the second type specimen was lost. The good news is that I have managed to unearth more than might have been expected about the early history of the type material.

The crucial lead came from our copy of *Ann. Mag. Nat. Hist.* for 1860, in which I found that p. 171 had been contemporaneously annotated with the accession numbers of the type specimens! One of these, 5.8.58.26, appears in the main Stockbook of the "Liverpool Free Public Museum" as "Snake from the Isld. of Laguna, presented by J.O.W. Fabert, 5 August 1858" (see photocopy 1). This same specimen is entered in another register (photocopy 2), where it is identified as "Leptodira torquata, one of the two original specimens described by Dr. Günther." The name was subsequently crossed out because "given in exchange to Dr. Günther for Brit. Museum for a specimen of *Xenodon viridis*, Dec. 1861." So the type now in London is evidently the one from Laguna Island.

The second specimen, 28.5.53.1, appears in a third, earlier Stockbook of what was briefly called the "Derby Museum." Here (photocopy 3) it is listed as "Snake, found in a cargo of timber ex Nicaragua, presented by Mr. Roberts, Duke's Dock (Liverpool), 28 May 1853." A later entry identifies this snake as one of "the original specimens described by Dr. Günther under the name *Leptodeira torquata*. . . ." This is the type that is now lost.

Where is Laguna Island? Evidently, neither Günther (1860) nor any of his contemporaries at

Liverpool wrote anything to suggest that they thought it was in Nicaragua. On the contrary, Günther clearly states that his material was believed to originate from two quite separate places and modern citations of the type locality as "Laguna Island, Nicaragua" seem totally unjustified. In short, I suspect that you have good reason to worry about the provenance of these specimens, because I can find no very compelling evidence that *either* snake came from Nicaragua!!

Malcom Largen, Curator of  
Amphibians and Reptiles

All data and the information from England seemed to confirm my conclusion that the types of *H. torquata* Günther had apparently come from Morelos, Mexico. I sent a rough draft of the manuscript to Dr. Hobart M. Smith for his perusal and for any comments he might provide. His response is as follows:

Isla Laguna makes no sense as a locality, but there is a "Lagunillas" in Morelos not too far from Mexico City, well within the range of the species and in the area you have concluded most likely includes the geographic source of the lectotype.

It is reasonably possible that Lagunillas is the type locality. A label so written could easily be misread as Laguna isla, hence Laguna Isla.

With the present data available and the information provided by Dr. Colin McCarthy, Mr. Malcom Largen, and Dr. Hobart Smith, there is overwhelming evidence to place the type locality of *Hypsiglena torquata torquata* Günther in, at, or near Lagunillas, Morelos, and to designate the available type specimen, British Museum No. 46.1.1.15, as the lectotype for *Hypsiglena torquata* Günther.

I am indebted to many for help and information leading to the conclusions that have been reached in this study. The information provided by Drs. Colin McCarthy and Hobart Smith and by Mr. Malcom Largen made it possible to establish a reasonable, if not the actual, solution to the problem of type locality. (Photocopies of materials from Mr. Largen are available on request.)

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